IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An isolated nucleic acid molecule selected from the group consisting of:

a) a nucleic acid molecule comprising a nucleotide sequence which is at least [[90%]] 95% identical to the nucleotide sequence of SEQ ID NO:1, or SEQ ID NO:3, wherein said nucleic acid molecule encodes a polypeptide having at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane;

b) a nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence with at least 90% identity to the amino acid sequence of SEQ ID NO:2, wherein said polypeptide has at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane;

c) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the fragment comprises at least 285 contiguous amino acids of SEQ ID NO: 2, wherein said at least 285 contiguous amino acids have at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; ~~and~~

d) a nucleic acid molecule which encodes a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the nucleic acid molecule hybridizes to a nucleic acid molecule comprising SEQ ID NO: 1, 3, or a complement thereof, under ~~stringent conditions~~ hybridization conditions of 0.5M sodium phosphate, 7% SDS at 65°C, followed by one or more washes at 0.2X SSC, 1% SDS at 65°C, wherein said nucleic acid molecule encodes a polypeptide having at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; and

e) a nucleic acid molecule which encodes the glycosyltransferase domain of 33945 (amino acids 139 to 322 of SEQ ID NO:2), wherein the glycosyltransferase domain has the ability to glycosylate a target molecule.

2. (Currently Amended) The isolated nucleic acid molecule of claim 1, which is selected from the group consisting of:

a) a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO: 1, SEQ ID NO:3; and

b) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2.

3. (Original) The nucleic acid molecule of claim 1 further comprising vector nucleic acid sequences.

4. (Original) The nucleic acid molecule of claim 1 further comprising nucleic acid sequences encoding a heterologous polypeptide.

5. (Currently Amended) A recombinant host cell which contains the nucleic acid molecule of claim 1.

6. (Currently Amended) The recombinant host cell of claim 5 which is a mammalian recombinant host cell.

7. (Currently Amended) A non-human mammalian recombinant host cell containing the nucleic acid molecule of claim 1.

8. -11. (Canceled)

12. (Currently Amended) A method for producing a polypeptide selected from the group consisting of:

a) a polypeptide comprising an amino acid sequence with at least 90% identity to the amino acid sequence of SEQ ID NO:2, wherein said polypeptide has at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane;

b) a polypeptide comprising a fragment of the amino acid sequence of SEQ ID NO:2, wherein the fragment comprises at least 285 contiguous amino acids of SEQ ID NO:2,

wherein said at least 285 contiguous amino acids have at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; ~~and~~

c) a polypeptide comprising a naturally occurring allelic variant of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule comprising SEQ ID NO:1, SEQ ID NO:3, or a complement thereof under ~~stringent conditions~~ hybridization conditions of 0.5M sodium phosphate, 7% SDS at 65°C, followed by one or more washes at 0.2X SSC, 1% SDS at 65°C, wherein said polypeptide has at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; and

d) a polypeptide comprising the glycosyltransferase domain of 33945 (amino acids 139 to 322 of SEQ ID NO:2), wherein the glycosyltransferase domain has the ability to glycosylate a target molecule;

comprising culturing the host cell of claim 5 under conditions in which the nucleic acid molecule is expressed.

13. – 17. (Canceled)

18. (Original) A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1 and instructions for use.

19. – 24. (Canceled)

25. (Currently Amended) A recombinant host cell which expresses the nucleic acid molecule of claim 1.

26. (Currently Amended) The recombinant host cell of claim 25 which is a mammalian recombinant host cell.

27. (Previously Presented) An isolated nucleic acid molecule, consisting of a nucleic acid sequence selected from the group consisting of:

a) SEQ ID NO: 1;

b) SEQ ID NO:3; and

c) a nucleic acid molecule which encodes a polypeptide having an amino acid sequence consisting of SEQ ID NO:2.

28. (New) The isolated nucleic acid molecule of claim 1, which is selected from the group consisting of:

a) a nucleic acid molecule comprising the nucleotide sequence which is at least 95% identical to the nucleotide sequence of SEQ ID NO:3, wherein said nucleic acid molecule encodes a polypeptide having at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane; and

b) a nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence with at least 95% identity to the amino acid sequence of SEQ ID NO:2, wherein said polypeptide has at least one activity selected from the group consisting of the ability to glycosylate a target molecule, the ability to bind to a simple sugar and the ability to attach to a membrane.

29. (New) The isolated nucleic acid molecule of claim 1, wherein the nucleic acid molecule comprises a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the fragment comprises at least 285 contiguous amino acids of SEQ ID NO: 2, wherein said at least 285 contiguous amino acids has the ability to glycosylate a target molecule.

30. (New) A recombinant host cell which expresses the nucleic acid molecule of claim 27.